

REMARKS

Claims 1-23 are in the application. Reconsideration and reexamination are respectfully requested.

1. Rejections Under 35 U.S.C. §102(e)

In both the predecessor, and the present continuation, applications claims 1-23 were, and presently remain, rejected under 35 U.S.C. §102(e) as being anticipated by the reference art patent no. 6,411,204 to Bloomfield ["Bloomfield"].

Applicant has consistently argued that Bloomfield neither teaches or suggests Applicant's claimed "second sensing any presence of brake light emissions to the forward of the vehicle... [so as to] activat[e]... the brake lights of the vehicle during the persistence of... brake light emissions of another vehicle as [is] determined by the second sensing."
(Claim 1)

This argument is again presented, in detail, in section 1.3. The next following sections 1.2 and 1.3 merely recapitulate matters to date, as will be required should an appeal prove necessary.

1.1 Applicant's Claims

Pertinent language from Applicant's claim 1 is quoted above. Applicant's independent claim 9 specifies likewise.

Applicant's independent claim 20 is directed to the system of Applicant's invention that supports platooning of vehicles.

Although Applicant believed, and still believes, that his quoted original claim language has always been unequivocal regarding that the dual criteria of "[sensing of] the persistence of either the application of the brakes of the subject vehicle... [or] brake light emissions of another vehicle vehicle [to the forward]" do give rise to activation of the brake lights of the subject vehicle, Applicant amended his claims upon the file

wrapper continuing patent application to specify that, in Applicant's claimed method and system, the brake lights of the subject vehicle are **always** activated (and maintained during the persistence of sensed brake lights to the forward) "regardless of any of (1) acceleration or de-acceleration or speed of the subject vehicle, (2) proximity of the vehicle to the forward, or (3) status of any air bag or anti-lock braking system of the subject vehicle." (Claim 1) (underling added)

These then are the amended claims presently under consideration, and the Examiner seems to have no quarrel nor confusion that Applicant is claiming a system that ALWAYS activates the brake lights of a subject vehicle responsively to detection of brake lights to the forward of the subject vehicle (as well as activation of the subject vehicle's own brakes).

1.2 Applicant's Invention

Applicant full well realizes that he must distinguish his invention as claimed, and not as taught, but asks the indulgence of the Examiner for this section 1.2 explaining that there is a real, and significant, difference between Applicant's invention (including as claimed) and any alternative system, such as that of the primary reference of Bloomfield. Such an alternative system operates, as will be explained, so as to activate the brake lights of a subject vehicle only upon sensed brake lights to the forward as do indicated (1) proximity, and/or (2) speed or closure. Factors of (3) engagement of the subject vehicles anti-lock braking system (ABS), (4) airbag deployment, or (5) still other factors, may also be involved in activation of the brake lights by prior art systems, Not so Applicant's system which **always** activates the brake lights of the subject vehicle based upon detection of brake lights to the forward.

One purpose of Applicant's invention is to rapidly alert a third (and subsequent) vehicle(s) in a 1-2-3 line of vehicles to

possible danger ahead of a second, next most forward, vehicle in the line (which second vehicle has Applicant's system) -- even if the first vehicle in line is not equipped with Applicant's system.

A conventional proximity sensor serves only to alert a driver of vehicle number three in the 1-2-3 line of vehicles only to the possible danger caused by a proximity change relative to the immediately forward vehicle (vehicle number 2) (which vehicle number 2 may or may not itself have a proximity sensor). By this time is often too late, A 100 car crash on the freeway in the California fog represents a lot of cars for and between which proximity was demonstrably improperly controlled.

The inventor actually conceived his invention while driving immediately behind a type of vehicle which did not allow him to see the brake lights of the vehicle immediately ahead of that vehicle. For alerting of later vehicles in a line, the (1) sensing of brake lights to the forward so as to (2) activate a vehicle's own brake lights (but not necessarily brakes) is essentially as effective as permitting later drivers in line to see the brake lights of one or more vehicles ahead of the vehicle immediately to their respective forward.

Moreover, one can reasonably assume the response time(s) of the ahead driver(s) is (are) probably similar to one's own response time. In other words, without the invention the total time required to propagate an alert from the vehicle ahead of the forward vehicle to the behind vehicle is essentially two driver responses (the ahead driver and ones self). With Applicant's invention the total time required is essentially only one driver response (the ahead driver). If the forward vehicle is also equipped with the invention, there is zero driver response time involved to propagate an alert from the vehicle ahead of the forward vehicle to the behind vehicle, and the total time can be in milliseconds! Note in Applicant's system that the brake lights come on as soon as depression of the brake pedal begins -

significantly before actual braking occurs.

To alternatively alert the behind driver of danger ahead of the forward vehicle using a proximity sensor as the prior art teaches requires (1) the vehicle ahead of the forward vehicle to start stopping (with both brake depression and braking), and (2) the forward vehicle driver response time and the forward vehicle to start stopping (with both brake depression and braking). This takes much more time than Applicant's system.

The problem with using a proximity sensor to accomplish alerting of vehicle to the rear is that it inherently requires the proximity between vehicles to change - which requires driver response time, brake depression time and braking occurrence time. That time is probably even greater than the usual driver response to brake lights. Furthermore, brake lights may light as a cautionary signal with no change in proximity. And, furthermore, the ahead vehicle may not have a proximity sensor in which case one can only sense danger directly arising from the ahead vehicle.

Interestingly, the system of Bloomfield and like systems -- with talk of automated deceleration and braking such as is at column 5, lines 54, et seq. Of Bloomfield -- might be said to be **primarily** directed to improving the odds that a vehicle so equipped will not suffer a **frontal** collision (although rear collisions are to some degree inhibited). The **primary** purpose of Applicant's system is not charity to a driver to the rearward: it is instead to improve the odds that a vehicle having Applicant's system will not itself suffer a **rear** collision.

1.3 Distinction of Applicant's Invention As Claimed, and Applicant's Traverse of the Factual Findings and Rejections of the Examiner

As before stated, the Examiner has rejected claims 1-23 under 35 U.S.C. 102(e) as being anticipated by Bloomfield et al.,

asserting as regards Applicant's claim 1 that "Bloomfield discloses for use with a subject vehicle having both brakes and brake lights (Bloomfield: column 3, lines 45-55), a method of activating the brake lights of the subject vehicle comprising: first sensing any application of the brakes of the subject vehicle (Bloomfield: column 4, lines 44-64); second sensing any presence of brake light emissions of another vehicle to the forward of the subject vehicle (Bloomfield: column 5, lines 5-45); and always activating the brake lights of the subject vehicle during the persistence of either an application of the brakes of subject vehicle by the first sensing (Bloomfield: column 4, lines 50-60), or during the brake light emissions of another vehicle as is determined by the second sensing (Bloomfield: column 6, lines 42-60) regardless of acceleration or de-acceleration of speed of the subject vehicle (Bloomfield: column 2, lines 50-61), proximity of the vehicle to the forward (Bloomfield: column 3, lines 25-30), or status of any air bag or anti-lock braking system of the subject (Bloomfield: column 5, lines 1-3)."

The Examiner's assertion that "the brake lights of the subject vehicle during the persistence of... or during the brake light emissions of another vehicle as is determined by the second sensing (Bloomfield: column 6, lines 42-60)" is in error. The subject text of the Bloomfield specification reads:

"By varying the intensity, color and/or rate of flash of indicator 14 in response to different degrees of deceleration and/or impact of vehicle 12, safety light system 10 provides a signal which effectively conveys the nature or condition of vehicle 12 to other vehicles. Furthermore, flashing indicator 14 at very high rates further enhances the effectiveness of the system, since this is a more effective means for attracting the attention of other drivers over slow flashing or continuous illumination. By providing such a signal regardless of whether the brake

pedal was applied, safety light system 10 also alerts others to hazardous conditions in situations where the driver of vehicle 12 may not even be aware of or responsive to such conditions. For example, if vehicle 12 collides with another vehicle or object without the driver of vehicle 12 touching the brakes, or vehicle 12 otherwise slows quickly without braking, such as by downshifting or mechanical failure, safety light system 10 may activate and/or modulate the indicator 14 to warn others of the rapid deceleration."

(Column 6, lines 42-60)

Clearly "the providing [of] such a [brake light] signal regardless of whether the brake pedal was applied" refers not to so doing in response to sensed brake lights to the forward (which are not even mentioned in this part of the Bloomfield specification), but rather when de-acceleration has occurred, specifically including by collision, **without** application of the brakes" -- exactly as is immediately next explained.

Admittedly, the examples given are not exclusive: "[f]or example, if vehicle 12 collides with another vehicle or object without the driver of vehicle 12 touching the brakes, or vehicle 12 otherwise slows quickly without braking, such as by downshifting or mechanical failure...." However, **all** examples, and any unstated situations, are directed that "safety light system 10 may activate and/or modulate the indicator 14 to warn others of the **rapid deceleration**."

Applicant's claimed system has **no** such limitation. Indeed, it may be noted not only that deceleration (let alone rapid deceleration) (of the subject vehicle) are **not** integral to Applicant's claimed invention. Indeed, in use of Applicant's claimed system the subject vehicle may actually be **accelerating**! Moreover, the sensed vehicle to the fore may also be **accelerating**! Still further, and as would potentially occur when someone to the head of vehicles touched, or 'rode', the brakes

even while accelerating, there need in fact be no vehicle (in an entire line of vehicles) that is actually decelerating (nor closing proximity **either!**) in order for Applicant's claimed system to work beneficially!

Most particularly, Bloomfield neither teaches nor suggests "**always** activating the brake lights of the subject vehicle during ... brake light emissions of another vehicle as is determined by the second sensing" (claim 1) (boldface added). Instead, Bloomfield teaches or suggests only that the brake lights of the subject vehicle may be activated, or even modulated, in accordance with deceleration and/or proximity regardless that the brake pedal (of the subject vehicle) is depressed. Such an operation is **not** what Applicant claims.

The Examiner references the same section of the Bloomfield specification in his rejection of Applicant's independent claim 9, stating that:

"Bloomfield discloses a system of activating the brake lights of the subject vehicle comprising: a first sensor for producing a first signal upon application of the brakes of the subject vehicle (Bloomfield: column 4, lines 44-64); a second sensor producing a second signal upon any presence of brake light emissions of another vehicle to the forward of subject vehicle (Bloomfield: column 5, lines 5-45); and an activator of the brake lights and/or brakes of the subject vehicle during the persistence of either the first signal (Bloomfield: column 4, lines 50-60), or the second signal (Bloomfield: column 6, lines 42-60), regardless of acceleration or de-acceleration of speed of the subject vehicle (Bloomfield: column 2, lines 50-61), proximity of the vehicle to the forward (Bloomfield: column 3, lines 25-30), or status of any airbag or anti-lock braking system of the subject (Bloomfield: column 5, lines 1-3), as in claim 9."

Again, the assertion that Bloomfield, column 6, lines 42-69 teaches or suggests always applying the brake lights of the subject vehicle dependant only upon the sensing of brake lights to the forward is incorrect.

Bloomfield perhaps contemplates sensing of brake lights to the forward (and other art does so contemplate), but, as discussed at column 5, line 26, et seq., only so as to detect proximity and/or rate of closure. No undue proximity (nor dangerous closure rate) equals no warning indicator 14. Not so in Applicant's claimed invention. Applicant activates the brake lights of the subject vehicle merely upon sensing of brake lights to the forward; proximity (or rate of closure) is irrelevant!

Finally, in rejection of Applicant's third and final independent claim 20, the Examiner states:

"Bloomfield discloses a system for propagating brake lights between vehicles upon highway (Bloomfield: column 3, lines 45-65), comprising: a sensor in a vehicle for sensing any application of brakes to the forward vehicle (Bloomfield: column 5, lines 5-45); and an activator of always activating the brake lights of the vehicle responsive to the second application of brake lights to the forward (Bloomfield: column 4 [SIC] lines 50-60) regardless of acceleration or de-. acceleration of speed of the subject vehicle (Bloomfield: column 2, lines 50-61), proximity of the vehicle to the forward (Bloomfield: column 3, lines 25-30), or status of any air bag or anti-lock braking system of the subject (Bloomfield: column 5, lines 1-3), wherein brake lights are always propagated from the forward of the vehicle to the rearward of the same vehicle (Bloomfield: column 6, lines 42-60), , , , "

Presumably the Examiner means:

"....an activator of always activating the brake lights of the vehicle responsive to the second application of brake lights to the forward (Bloomfield: column 6 lines 50-60)".

As before, neither column 4 nor column 6 Bloomfield so teaches or suggests> Instead, Bloomfield teaches only that application of brake lights to the forward may be used in determination of proximity and/or rate of closure which -- when and if in excess of a threshold (and **only** so when, and **only** so if) -- can be used to activate the warning indicator 14. This decidedly does not teach or suggest to **always** activate the brake lights, as is claimed by Applicant who specifies:

"...an activator **always** activating the brake lights of the vehicle responsive to the sensed application of brake lights to the forward...." (Claim 20) (boldface added)

2 Summary

The present amendment and remarks have overcome and discussed each of the bases for the rejections presented in the Office Action. No new subject matter has been introduced by the present amendment.

In consideration of the preceding amendment and accompanying remarks, the present application is deemed in condition for allowance. The timely action of the Examiner to that end is earnestly solicited.

Applicant's undersigned attorney is at the Examiner's disposal should the Examiner wish to discuss any matter which might expedite prosecution of this case.

Sincerely yours,

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CERTIFICATION UNDER 37 CFR 1.10

I hereby certify that this AMENDMENT and the documents referred to as attached therein are being deposited with the United States Postal Service as first class mail, postage prepaid, addressed to Mail Stop Amendment - Patents, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450, on the date written below.

December 28, 2005 William C. Fuess

Date

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